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## RESEARCH ARTICLE

### ESTIMATION OF THE QUALITY OF PRE-OPERATIVE ANESTHESIA EVALUATION PRACTICE FROM PATIENTS' VIEWPOINT.

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#### Abstract

**Background:** The pre-operative anesthesia evaluation of any patients had the highest preference in the quality of care. But policies rarely appreciate their weight. Alongside with the examination of the patient. The pre-operative visit improves contact between the patient and the anesthetist.

**Objective:** The undertaken study aimed at discovering the estimation of the quality from patients' viewpoint by using a questionnaire in pre-operative anesthesia evaluations.

**Methodology:** The study design is descriptive-analysis carried out for (300) patients, selected by simple, organized random technique. The study members collected the data by a questionnaire contained Likert's scale with five points. The research used 95% for confidence level, and the P-value was ( $<0.05$ ). The group of the study received the survey after recovery from anesthesia. The statistical package of social science is used for analysis and demonstrated in frequency and percentage. The program made cross-tabulation and provided P-value. Excel program produced figures and offered tables for some data.

**The results:** The results of the current study released a decline in patient satisfaction, and around 40.3% is the value of net satisfaction with the quality of care in preoperative anesthesia evaluation.

**Conclusion:** The level of quality in the preoperative anesthesia evaluation is significantly low. The study is recommending further studies to investigate the causes of poor quality of preoperative anesthesia evaluation.

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**Introduction:-**

Prior preparations of any patient for anesthesia, the anesthesia specialist demands a full comprehension of the patient's preoperative medical status, i.e., the history and choices of the anesthetic techniques, besides the risks during and after the operation. Anesthesia specialist only can offer all of these skills, and the utmost responsibility for pre-operative anesthetic assessment lies within the roles of the anesthetist. (Verma et al. 2010). When the anesthetist provides correct evaluation, he will improve patient satisfaction, reduce anxiety, and avoid physical complications. Resulting from insufficient evaluation or unnecessary testing, besides economically advantageous by avoiding operation delays. (David E. Longnecker, Sean C. Mackey, Mark F. Newman, Warren S. Sandberg 2018). Studies showed patients and providers of anesthesia had the highest rate of satisfaction with some evaluation modalities. They concluded care through telephone, and direct evaluations were equal. Consultation by phone provides more patient time and cost-saving benefits without more day of surgery hold up. (Applegate et al. 2013).

The evaluation of any patient point of view is a fundamental part of quality improvement in preoperative anesthesia amenities. Visit of anesthetists affects the quality of care. This visit empowers anesthesia specialist with general knowledge of the condition, character of the surgery, to decide on the kind of anesthesia and talk about perioperative complications and their management with the patient. Patients used to complain regarding preoperative anesthetic evaluation. (Gebremedhn and Nagaratnam 2014). Agreed with the American society of the anesthesiologist. Despite the implementation of the current standards of assessment. Patient's satisfaction experienced a gap in the adequacy of evaluation, and the undercurrent position of the patient satisfaction with the anesthesia is even more complicated. (Glenn E., Meghan L., Peggy G. 2014). Patient happiness is an essential component of quality assessment. However, many of the sources collect reluctant data on satisfaction in disclosing detailed information, and there is still little information on the possible determinants of patient satisfaction. (Bible et al. 2018). Including patients experience in medical services is considered the leading indicator of quality. (Caljouw, Van Beuzekom, and Boer 2008). Relevant references from the identified articles retrieved for analysis and the manual searching of citation lists showed patient satisfaction is an essential indicator of the quality of medical services listed by the American Society of Anesthesiologists (ASA). Many factors influence patient satisfaction, For example, patient's opinion and knowledge that play an essential role in patient satisfaction during an emergency operation, and improves the patient's medical and psychological treatment to play a critical role in the success of the procedure. (Shah et al. 2015). Patients' involvement in surgery and preoperative anesthetics care among the most significant features of quality. Patients always consider the recognition of anesthesia specialist is unsatisfactory, and even some patients do not consider them a real specialist. Since 1996, a report on patient satisfaction revealed a rising requirement for the assessment of patient satisfaction with anesthesia care and encouraged to shape a reliable assessment methodology. However, the streaming clinical involvement explored all tools used for the evaluation are not favorably assured or accurately designed. (Alsaif et al. 2018).

The study hypothesized reduced quality of care in pre-operative anesthesia evaluation clinics and tried to find the association between patients' satisfaction and quality of care. The study gives a demonstration of how low-quality of care affects the level of comfort with anesthesia. Sudan one of many developing countries, had difficulty in distributing adequate budgets for health expenditure, as well as the inefficient use of available resources, mainly for administrative reasons, low economic performance and population growth, leading to weak growth in health also poor budget allocation and limited opportunities for excellent social services, including health care. (A Ebrahim et al. 2017).

The administration systems of the clinics of preoperative anesthesia evaluation differ depending on the hospital policies. Whereas budgetary and some fatal problems may prevent an attentive direct preoperative anesthesia evaluation, various writers insist that application of questionnaire is useful and possible for evaluation. This inquiry would serve as a tool to identify patients at high risk for anesthesia complications and give chances for referring of patients to an anesthesia clinic /or specialist consultation. But unlike from the patient point of view, this not accepted. (Mendes et al. 2013). In this study, the patient stress to meet the anesthetist face to face and discuss possible options and decide with satisfaction. The present study aimed to estimate chances in describing health conditions, recommending the care, and returning in the future, asking for the same concern form patients' viewpoints.

**Methods:-****Study area:**

The study is carried out at the hospitals of Saad Abu El Ella in Khartoum state, and EL-MAK NIMR university, found in Shendi city in River Nile state in Sudan. The research duration is from 2016 - 2019.

**Study population:**

Healthy participants of both genders included age group from 15 to less than 85 years old. They came to the inpatient unit to undergo elective surgery. The researchers selected the samples by organized simple random technique. All of them received preoperative anesthesia evaluation individually.

**Study design:**

This study designed descriptive-analytical research to estimate the patient's point of view about the quality of preoperative anesthesia evaluation among healthy adult male and female participant with different ages

**Ethical approval:**

Authorities in the study area permitted the undertaken study. The team of the study explained the procedure to participants and assured their privacy. The participants recognized the objectives of the research and, provided their acceptance. The ethics committee of the institution approved the study.

**Description of Study Procedure**

Anesthesia technologists who were not participating in preoperative anesthesia evaluation, did a direct interview and filled a questionnaire. The study team used 5-point psychometric (Likert's scale) to rate the degree of patient satisfaction.

They measured the quality of preoperative anesthesia evaluation. The researchers approached the demographic criteria of patients. Participants took the questionnaire when the anesthetist visited them after anesthesia and, surgery. The scoring was as follows: score 5 for Strongly Agree (SA), 4 for Agree (A), 3 for Undecided or neutral (N), 2 for Disagree (DA) and 1 for strongly Disagree (SDA).

The overall satisfaction of the patient is rated.

**Statistical analysis:**

In the recently undertaken study, the statistic team used (SPSS), the statistical package of social science to find out the analysis of the data. The data presented the frequency and percentage of the variables. The current research used an Excel program for drawing Bar, and pie graph figures, and showed some data in tables. The study applied P-value to estimate the connection between different variables and considered ( $P < 0.05$ ) statistically significant.

**Results:-****Patients' characteristics: -**

The study included a total of 300 participants of different types of anesthesia and surgeries. The mean and the (standard deviation) of age was 37.83 (0.99) — the generations of clients had age ranged from 15 to 85 years old. Distribution of participants by considering ages and satisfaction with quality revealed ( $P = 0.607$ ). (See table 1). The gender of the patient was (38.13%) males and (61.87%) females. The study showed significant variation in the levels of being satisfied; Females were more satisfied than male ( $P = 0.00$ ), Table 2. The study discovered interrelation in the degree of satisfaction among the clientele and their literacy ( $P = 0.02$ ) (Table 3). Also, the paper revealed a clear link between the residence of the research participants and satisfaction ( $P = 0.06$ ) (Table 4). The participants in the countryside were less satisfied than civilians. No difference regarding the number of visits in satisfaction ( $P = 0.185$ ), (Table 5).

The result of this recent study routed out a justifiable difference between physical status and levels of satisfaction ( $P = 0.02$ ). Group ASA4 were less satisfied than group ASA 1 (Table 6).

**Preoperative patient point of view and satisfaction: -**

Among all participants ( $n = 300$ ), only 14.30% strongly agreed upon chances for describing their health conditions in the pre-operative anesthesia evaluation, and about 6.70% who strongly disagreed. (Fig 1). Regarding recommendation of the pre-operative anesthesia evaluation to friends or relatives, 21.74% strongly agree and

satisfied, and about 11.70% strongly disagree they said they were firmly not satisfied. (Fig 2). Only 12.33% of them said they strongly agreed to return to this hospital for services of the pre-operative anesthesia in the future, and about 10% were firmly disagreed with that (fig 3).

The rate of quality of care by the anesthetist in the pre-operative anesthesia evaluation had rated to be only 40.33% for participant who strongly agreed, and 6.66 % for those strongly disagreed (fig 4).

**Table 1:-**The distribution of patients' satisfaction wise ages in pre-operative anesthesia area.

Age group	Likert's scale for patient's satisfaction						P-value
	SA	A	N	DA	SDA	Total	
15—30	11	13	30	32	25	111	.607
31—40	11	6	19	35	24	95	
41—60	5	4	19	18	18	64	
61—85	5	5	7	7	6	30	
Total	32	28	75	92	73	300	

**Table 2:-**Distribution of patient's satisfaction wise gender in pre-operative anesthesia area.

Gender	Likert's scale for patient's satisfaction						P-value
	SA	A	N	DA	SDA	Total	
Male	12	10	44	26	22	114	.000
Female	20	18	30	66	51	185	
Total	32	28	74	92	73	299	

**Table 3:-**Comparison of patient's satisfaction according to Levels of education in pre-operative anesthesia area.

Levels of education	Likert's scale for patient's satisfaction						P-value
	SA	A	N	DA	SDA	Total	
Illiterate	12	8	26	48	43	137	.002
Under graduated	9	12	14	15	7	57	
Graduated	8	7	22	25	18	80	
Post graduated	3	0	11	4	4	22	
Total	32	27	73	92	72	296	

**Table 4:-** Patient's satisfaction by residency distribution in pre-operative anesthesia area

Residency	Likert's scale for patient's satisfaction						P-value
	SA	A	N	DA	SDA	Total	
Urban	19	11	46	38	27	141	.006
Rural	13	15	26	54	46	154	
Total	32	26	72	92	73	295	

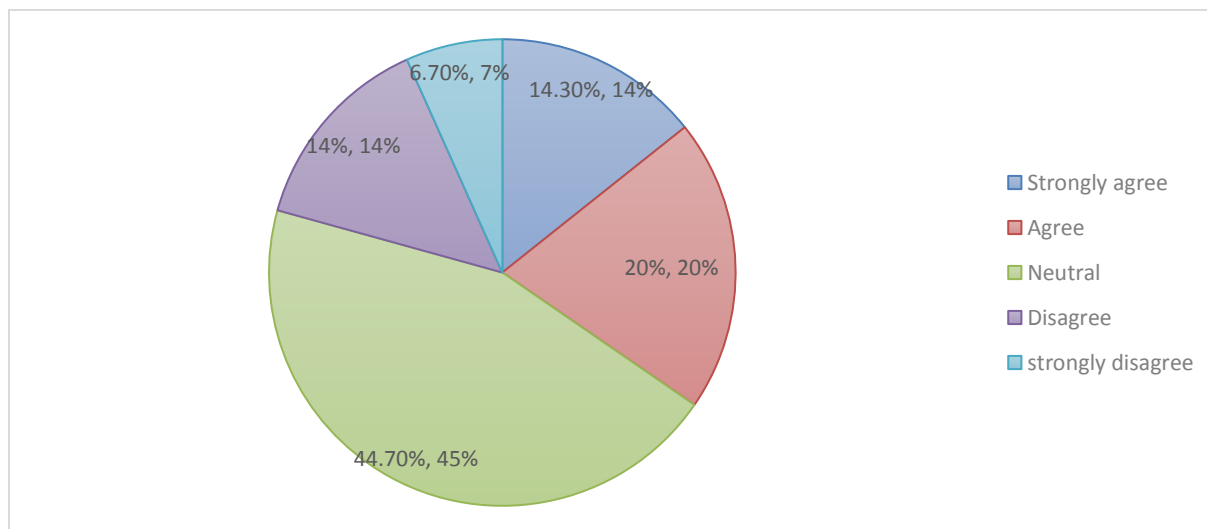
**Table 5:-**Patients satisfaction considering the frequency of visiting the pre-operative anesthesia area.

Frequency of visit	Likert's scale for patient's satisfaction						P-value
	SA	A	N	DA	SDA	Total	
New	16	13	43	51	50	173	.185
Repeat	15	15	30	41	22	123	
Total	31	28	73	92	72	296	

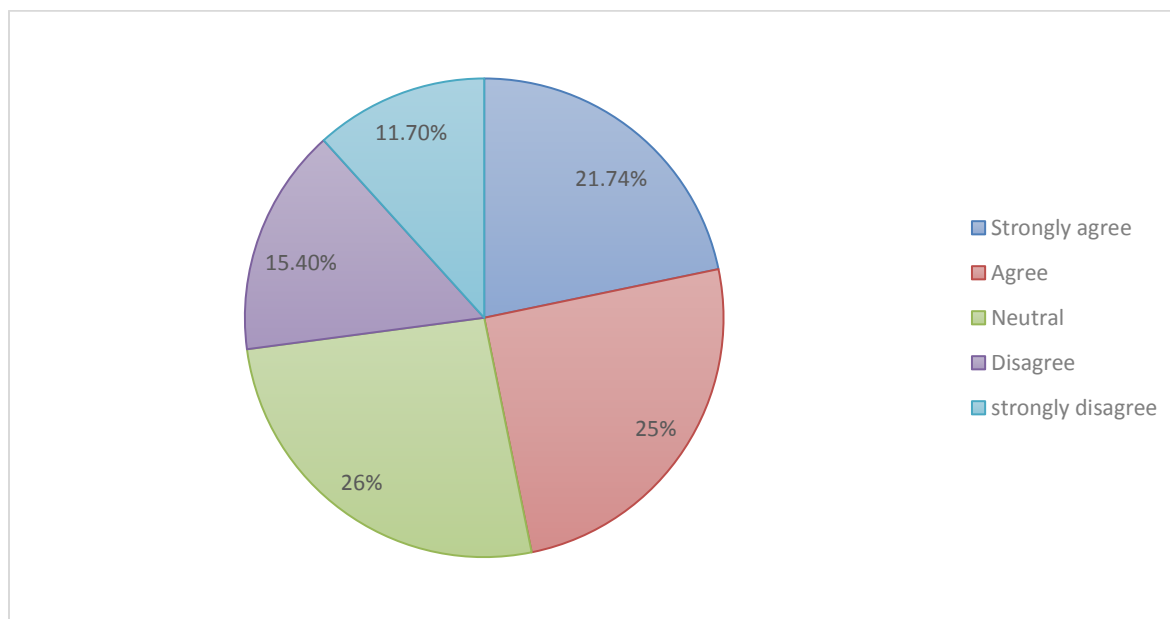
**Table 6:-**Patients satisfaction comparing physical status (ASA) in the pre-operative anesthesia area

Physical status	Likert's scale for patient's satisfaction						P-value
	SA	A	N	DA	SDA	Total	
ASA1	16	17	30	40	31	134	

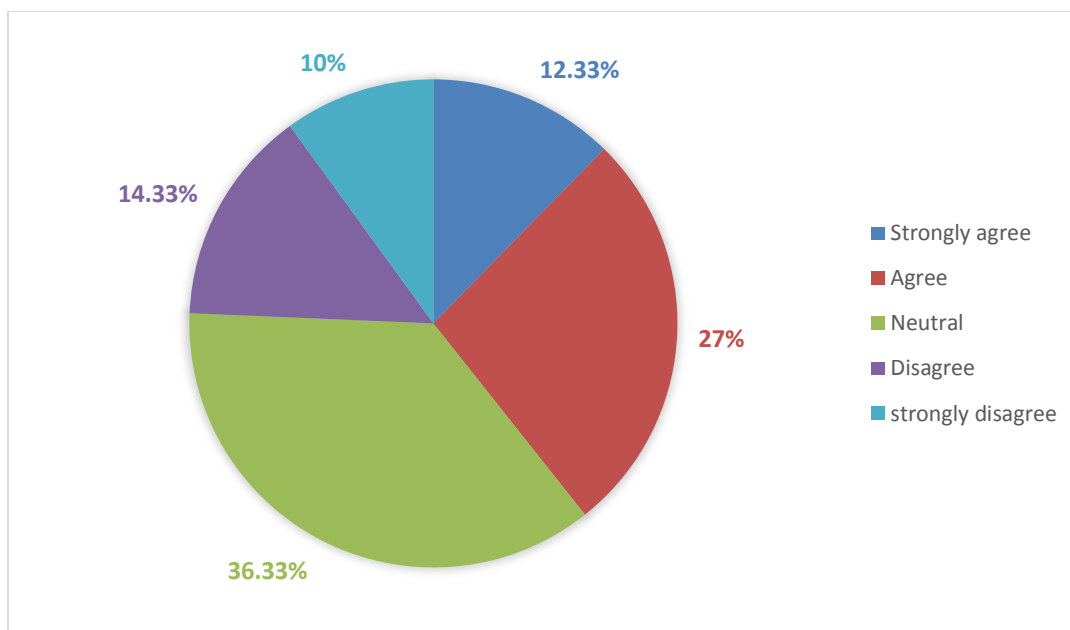
ASA2	9	5	19	36	31	100	.002
ASA3	5	7	13	13	5	43	
ASA4	5	0	8	2	4	19	
Total	35	29	70	91	71	296	



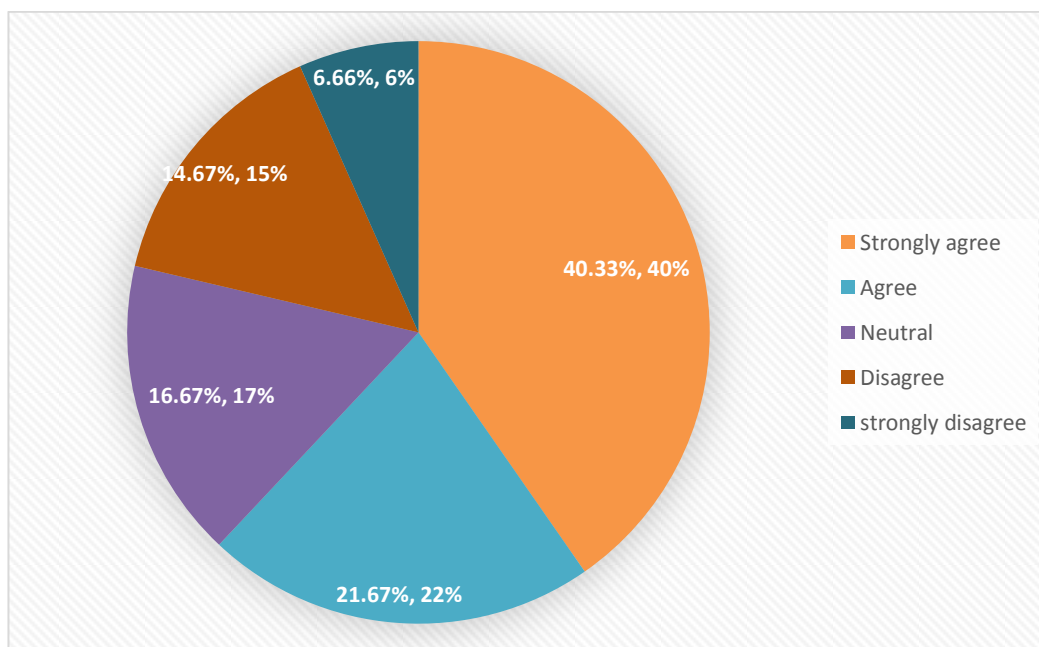
**Figure 1:-** Participant's response to the chances of describing their health conditions in the pre-operative anesthesia evaluation area.



**Figure 2:-** Participant's concept to recommend the pre-operative anesthesia evaluation to friends or relatives.



**Figure 3:-** Participant's decision to return to this hospital for services



**Figure 4:-**Rate of quality of care by the anesthetist from the patient point of view.

## Discussion:-

The study stressed the patient point of view concerning the quality of preoperative anesthesia evaluation services. The participants expressed a low rate of satisfaction to chances in the discussion of their medical health conditions with the anesthetist. And only (14.3%) of all participants were reported strongly agreed upon finding enough opportunity to talk with the anesthetist. Because they were unhappy, they reduced the rating of care.

Psychology specialists revealed the importance of discussing patient opinion since earlier than 2006 and, assured patients' views of their illness or symptoms in the course of the medical treatment. Specialist found; patients tend to reduce their beliefs with doctors due to the lack of expressing opinions. Researchers discussed the matter of medical perceptions and its significant role in creating awareness of patients' views to improve the quality of medical consultations. (Petrie and Weinman 2006).

The importance of talking with the patient came from fact focused on giving details of health condition. These details will educate the patients and made them involved in medical care. Many studies agreed with information effects on the patient's understanding and self-satisfaction with pain relief (Meissner et al. 2015). Many interventions in discussing specific patient issues and providing education will reduce the anxiety in the preoperative period. They are providing the patient a chance to talk help in eliminating complications in postoperative.

Particular information satisfies the expectation of patients. And sure to affects the total quality of care. (Chaichian 2013). A study carried out in Nigeria agreed with the current results, and justified this low rate, is due to anesthesia specialist, who faced many issues preventing preoperative anesthesia evaluation. The familiar problem was the absence of the patient for assessment in 73.1% of the cases followed by a hectic time table (7.4%). Proper planning and counseling of patients before procedures can reduce the difficulty of establishment of the preoperative anesthesia clinic to solve the situation. (Ezike, Amucheazi, and Ajuzieoegu 2011).

In the current study, the participant described the idea of recommendation to their friends and relatives, with reduced satisfaction rate. Only (21.74%) strongly agreed to feel satisfied in telling others about the service. Together the Participants gave (12.33%) regarding the decisions to return for further anesthetic care in the future. Very noticeable in this work, the need for fulfillment of the preoperative anesthesia evaluation from the patient point of view. The product of the study addressed the absence of quality in the service. The result agreed with a survey carried out in England. They discovered the common factor identified as a barrier to a successful preoperative assessment. This barrier causes difficulty to follow guidelines for preoperative investigations. Many digital instruments clarify the process to decide which preparation they wanted and under which situations. However, when they complete the check-up with 100 clients in the pre-operative evaluation clinic. They discovered that only 33% of the participants had the appropriate preoperative inquiries, and well organized according to directions. They recommended the use of a potent tool by the assessment team, and they requested them to reuse it for each patient. They repeated the audit over the following month, and they explored an improvement in compliance with guidelines to 88%. (Koris and Hopkins 2015). The final quality of services in the current work was rated only (40.3%). All participants strongly agreed to the low quality of pre-operative anesthesia assessment. Compared to a survey in 2017 KSA, 68 patients evaluate excellent with the percentage of (94.4%) (Baroudi, Nofal, and Ahmad 2010).

Compared with a study done in Ethiopia, the net ratio of participants satisfied with anesthesia care was 72.3" %. (Obsa et al. 2016). In another study, an achieved level of overall satisfaction score was less than 85% (Chanthong et al. 2009). A second study, in Ethiopia, wrote a report about satisfaction. The survey result was the highest (82.7%), with the way the clinicians checked them. In the former discoveries, studies showed the client satisfaction rate with the health services to be 77%. (Assefa, Mosse, and H/Michael 2011). Besides, the University of Gondar teaching hospital revealed the percentage of patients who said they were satisfied with anesthesia services was 90.4 (Gebremedhn et al. 2015).

The variance in the finding with the recent study had many causes, among them are the economic factors. That affected the health polices, and the reduced budget allocated for preoperative anesthesia evaluation, besides junior staff used to provide the given care, not the consultant.

Satisfaction in uneducated patients was 59.7%. Participants without the ability to read and write had a higher level of being satisfied. This result agreed with a study conducted in Saudi Arabia showed that the higher education level reduced satisfaction as well. (Baroudi, Nofal, and Ahmad 2010). The quality of care is appreciated more with



educated people, and one of the factors determined patient happiness with anesthesia in the current study. These factors are preventable or better treated. Patient comment about the ranks of pre-anesthetic care is valuable, like any other medical services. Every effort should be taken to increase overall patient satisfaction by improving the quality of medical services.

### Conclusion:-

In the aspects of the following results, considering the degree of total patient's satisfaction with the value of preoperative anesthesia evaluation, the study observed a significantly low rate of quality. It is essential to revise the policies of health care organizations, increase motivations, as well as stress the preparation of the clinics, which will affect the caliber of the care. The study is suggesting advanced studies to discover factors affecting patient settlement in the pre-operative anesthesia evaluation clinics.

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